

Application Serial No.: 10/664,920

Reply to the Advisory Action dated August 30, 2005, and
the Official Action dated June 22, 2005

IN THE CLAIMS

Please amend the claims as follows:

1. (Canceled)

2. (Canceled)

3. (Currently Amended) A method ~~for~~ of evaluating a fixing member used to fix a toner comprising:

carrying out a hardness test on the fixing member by measuring a hardness value equal to a pressure applied to a surface layer of the fixing member by a probe load divided by an area of indentation as a function of indentation depth measured while the pressure is applied at a room temperature for the indentation depth of 1 μm from a surface of the surface layer, wherein

when the hardness value for the indentation depth of 1 μm is less than or equal to 30 N/mm^2 , said fixing member is regarded as a standard product.

4. (Currently Amended) A method ~~for~~ of evaluating a fixing member used to ~~fix~~ fix a toner comprising:

carrying out a hardness test on the fixing member by measuring a hardness value equal to a pressure applied to a surface of the fixing member by a probe load divided by an area of indentation as a function of indentation depth measured while the pressure is applied at a room temperature for indentation depths of 1 μm to 4 μm from the surface of said fixing member, wherein

when the hardness value for the indentation depth of 1 μm is less than or equal to 30 N/mm^2 , and

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when the hardness value for the indentation depth of 4 μm is less than or equal to 12 N/mm^2 ,

said fixing member is regarded as a standard product.

5. (Currently Amended) A method ~~for~~ of evaluating a fixing member according to claim 4, wherein said hardness test is carried out at a test environment temperature of 25°C.

6. (Currently Amended) A method ~~for~~ of evaluating a fixing member used to fix a toner, comprising:

carrying out a hardness test at a test environment temperature of 200°C on the fixing member by measuring a hardness value equal to a pressure applied to a surface of the fixing member by a probe load divided by an area of indentation as a function of indentation depth measured while the pressure is applied for indentation depths of 1 μm to 4 μm from the surface of said fixing member, wherein

when the hardness value for the indentation depth of 1 μm is less than or equal to 10 N/mm^2 , and

when the hardness value for the indentation depth of 4 μm is less than or equal to 4 N/mm^2 ,

said fixing member is regarded as a standard product.

7. (Currently Amended) A method ~~for~~ of evaluating a fixing member according to claim 4, wherein a contact angle when a water-drop is contacted onto the surface of said fixing member is more than 95 degrees.

8. (Currently Amended) A method ~~for~~ of evaluating a fixing member used to fix a toner, comprising:

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carrying out a hardness test respectively at a room temperature and at a running temperature of the fixing member by measuring a hardness value equal to a pressure applied to a surface of the fixing member by a probe load divided by an area of indentation as a function of indentation depth measured while the pressure is applied for indentation depths of 1 μm to 4 μm from the surface of the fixing member, wherein

when each of the hardness values at a same depth from the surface of said fixing member is compared, if the hardness value at the room temperature is three times the hardness value at the running temperature, said fixing member is regarded as a standard product.

9. (Currently Amended) A method ~~for~~ of evaluating a fixing member used to fix a toner, said fixing member being produced by sequentially coating an elastic layer and a separation layer onto a base element, comprising:

carrying out a hardness test by measuring a hardness value equal to a pressure applied to a surface of said separation layer by a probe load divided by an area of indentation as a function of indentation depth measured while the pressure is applied for each of first and second indentation depths from the surface of said separation layer, wherein

when the hardness value for each of said first and second indentation depths is in a predetermined value, said fixing member is regarded as a standard product.

10. (Currently Amended) A method ~~for~~ of evaluating a fixing member used to fix a toner, said fixing member being produced by sequentially coating an elastic layer and a separation layer onto a base element, comprising:

carrying out a hardness test by measuring a hardness value equal to a pressure applied

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to a surface of said separation layer by a probe load divided by an area of indentation as a function of indentation depth measured while the pressure is applied for each of indentation depths of 1 μm to 4 μm from the surface of said separation layer, wherein

when the hardness value for the indentation depth of 1 μm is less than or equal to 30 N/mm^2 , and

when the hardness value for the indentation depth of 4 μm is less than or equal to 12 N/mm^2 ,

said fixing ~~belt~~ member is regarded as a standard product.

11. (Currently Amended) A method ~~for~~ of evaluating a fixing member according to claim 10, wherein said hardness test is carried out at a test environment temperature of 25°C.

12. (Currently Amended) A method ~~for~~ of evaluating a fixing member used to fix a toner, said fixing member being produced by sequentially coating an elastic layer and a separation layer onto a base element, wherein

a hardness test is carried out at a test environment temperature of 200°C on the fixing member by measuring a hardness value equal to a pressure applied to a surface of said separation layer by a probe load divided by an area of indentation as a function of indentation depth measured while the pressure is applied for indentation depths of 1 μm to 4 μm from the surface of said separation layer,

when the hardness value for the indentation depth of 1 μm is less than or equal to 10 N/mm^2 , and

when the hardness value for the indentation depth of 4 μm is less than or equal to 4 N/mm^2 ,

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said fixing member is regarded as a standard product.

13. (Currently Amended) A method ~~for~~ of evaluating a fixing member according to claim 10, wherein a contact angle when a water-drop is contacted onto the surface of said separation layer is more than 95 degrees.

14. (Currently Amended) A method ~~for~~ of evaluating a fixing member according to claim 10, wherein said elastic layer is made of silicone gum.

15. (Currently Amended) A method ~~for~~ of evaluating a fixing member according to claim 10, wherein said separation layer is made of a material including at least one of polytetrafluoroethylene (PTFE) resin, polytetrafluoroethylene-perfluoro-alkoxyl (PEA) vinyl ether copolymer resin, and polytetrafluoroethylene-fluorinated ethylene propylene (FEP) copolymer resin.

16. (Currently Amended) A method ~~for~~ of evaluating a fixing member according to claim 10, wherein said fixing member is a fixing belt.

17. (Currently Amended) A method ~~for~~ of evaluating a fixing member according to claim 10, wherein said fixing member is a thermal fixing roller.

18.-41. (Canceled)